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Responsive to 29 June 2005 Office Action

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-26 (Cancelled)

Claim 27 (New) A plasma processing method for conducting a plurality of different processing on a film of a front side of a specimen placed on a mount surface of a specimen table disposed inside of a processing chamber using plasma generated in the processing chamber, the method comprising:

adjusting an internal temperature of the specimen table formed of a heat conduction member so that a temperature in a central portion of the specimen table becomes higher than a temperature in an outer circumferential portion of the specimen table by a predetermined value;

generating a plasma including organic polymer by supplying a processing gas to the interior of the processing chamber and processing the film by applying a bias electric power to the specimen table, while, after the specimen is placed on the specimen table, supplying a heat conducting gas with a lower pressure to a space between the mount surface positioned above the central portion of the interior of the specimen table and a rear side of the specimen, and supplying a heat conducting gas with a higher pressure to a space between the mount surface positioned above the outer circumferential portion of the interior of the specimen table and the rear side of the specimen to adjust the heat conducting gas to a predetermined pressure

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difference in spaces of the central portion and the outer circumferential portion of the rear side of the specimen, as a first processing step; and

processing the film while adjusting a pressure of the heat conducting gas between the spaces of the central portion of the specimen and the outer circumferential portion of the specimen in the space between the rear side of the specimen and the specimen table to a value different from the predetermined pressure difference in a state where the temperature in the central portion of the interior of the specimen table is higher than the temperature in the outer circumferential portion before or after the first processing step, as a second processing step.

Claim 28 (New) A plasma processing method for processing plural layers of different films of a surface of a specimen placed on a mount surface of a specimen table disposed inside of a processing chamber using plasma generated in the processing chamber, the method comprising:

adjusting an internal temperature of a central portion of the interior of the specimen table formed of a heat conduction member to be higher than a temperature of an outer circumferential portion by a predetermined value;

generating a plasma including organic polymer by supplying a processing gas to the interior of the processing chamber and processing one of the plural layers of films while supplying a bias electric power to the specimen table, while, after the specimen is placed on the specimen table, supplying a heat conducting gas with a lower pressure to a space between the mount surface positioned above the central portion of the interior of the specimen table and a rear side of the specimen, and

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supplying a heat conducting gas with a higher pressure to a space between the mount surface positioned above the outer circumferential portion of the interior of the specimen table and the rear side of the specimen to adjust the heat conducting gas to a predetermined pressure difference between the spaces of the central portion and the outer circumferential portion of the rear side of the specimen as a first processing step; and

processing a film disposed above or below the one film while adjusting a pressure of the heat conducting gas between the spaces of the central portion of the specimen and the outer circumferential portion of the specimen in the space between the rear side of the specimen and the specimen table to a value different from the predetermined pressure difference in a state where the temperature in the central portion of the interior of the specimen table is higher than the temperature in the outer circumferential portion before or after the first processing step as a second processing step.

Claim 29 (New) The plasma processing method according to claim 27, comprising:

adjusting the respective temperatures of the central portion and the outer circumferential portion of the specimen table, or a temperature therebetween to the predetermined temperature difference; and

processing another film different from the one film while adjusting a pressure of the heat conducting gas in the spaces of the central portion and the outer circumferential portion of the specimen to a value different from the predetermined

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pressure difference in the space between the rear side of the specimen and the specimen table as the second step.

Claim 30 (New) The plasma processing method according to claim 28, comprising:

adjusting the respective temperatures of the central portion and the outer circumferential portion of the specimen table, or a temperature therebetween to the predetermined temperature difference; and

processing another film different from the one film while adjusting a pressure of the heat conducting gas in the spaces of the central portion and the outer circumferential portion of the specimen to a value different from the predetermined pressure difference in the space between the rear side of the specimen and the specimen table as the second step.

Claim 31 (New) The plasma processing method according to claim 27, wherein a temperature of the overall specimen table is adjusted by adjusting a temperature of a cooling medium that circulates within a passage formed in the central portion of the specimen table in the interior of the specimen table, and a temperature of a cooling medium that circulates within a passage formed in the outer circumferential portion of the specimen table.

Claim 32 (New) The plasma processing method according to claim 28, wherein a temperature of the overall specimen table is adjusted by adjusting a temperature of a cooling medium that circulates within a passage formed in the

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central portion of the specimen table in the interior of the specimen table, and a temperature of a cooling medium that circulates within a passage formed in the outer circumferential portion of the specimen table.

Claim 33 (New) The plasma processing method according to claim 29, wherein a temperature of the specimen table is adjusted by adjusting a temperature of a cooling medium that circulates within a passage formed in the central portion of the specimen table in the interior of the specimen table, and a temperature of a cooling medium that circulates within a passage formed in the outer circumferential portion of the specimen table.

Claim 34 (New) The plasma processing method according to claim 27, wherein at least one of a pressure of the heat conducting gas in the central portion and the outer circumferential portion of the specimen, the pressure difference, and a temperature or a temperature difference of the central portion and the outer circumferential portion in the interior of the specimen table is adjusted on the basis of information obtained before processing the specimen.

Claim 35 (New) The plasma processing method according to claim 28, wherein at least one of a pressure of the heat conducting gas in the central portion and the outer circumferential portion of the specimen, the pressure difference, and a temperature or a temperature difference of the central portion and the outer circumferential portion in the interior of the specimen table is adjusted on the basis of information obtained before processing the specimen.

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Claim 36 (New) The plasma processing method according to claim 29, wherein at least one of a pressure of the heat conducting gas in the central portion and the outer circumferential portion of the specimen, the pressure difference, and a temperature or a temperature difference of the central portion and the outer circumferential portion in the interior of the specimen table is adjusted on the basis of information obtained before processing the specimen.

Claim 37 (New) The plasma processing method according to claim 30, wherein at least one of a pressure of the heat conducting gas in the central portion and the outer circumferential portion of the specimen, the pressure difference, and a temperature or a temperature difference of the respective cooling media which circulate in the central portion and the outer circumferential portion in the interior of the specimen table is adjusted on the basis of information obtained before processing the specimen.

Claim 38 (New) The plasma processing method according to claim 31, wherein at least one of a pressure of the heat conducting gas in the central portion and the outer circumferential portion of the specimen, the pressure difference, and a temperature or a temperature difference of the respective cooling media which circulate in the central portion and the outer circumferential portion in the interior of the specimen table is adjusted on the basis of information obtained before processing the specimen.